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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,861	12/04/2003	Curt E. Metzbower	LDC-913	7904

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DENTSPLY INTERNATIONAL INC
570 WEST COLLEGE AVENUE
YORK, PA 17404

EXAMINER

DONAHOE, CASEY D

ART UNIT	PAPER NUMBER
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3732

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/727,861	Applicant(s) METZBOWER, CURT E.	
	Examiner Casey Donahoe	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on April 5, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/26/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection due to the amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites the limitation "said chamber wall" in line 16. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

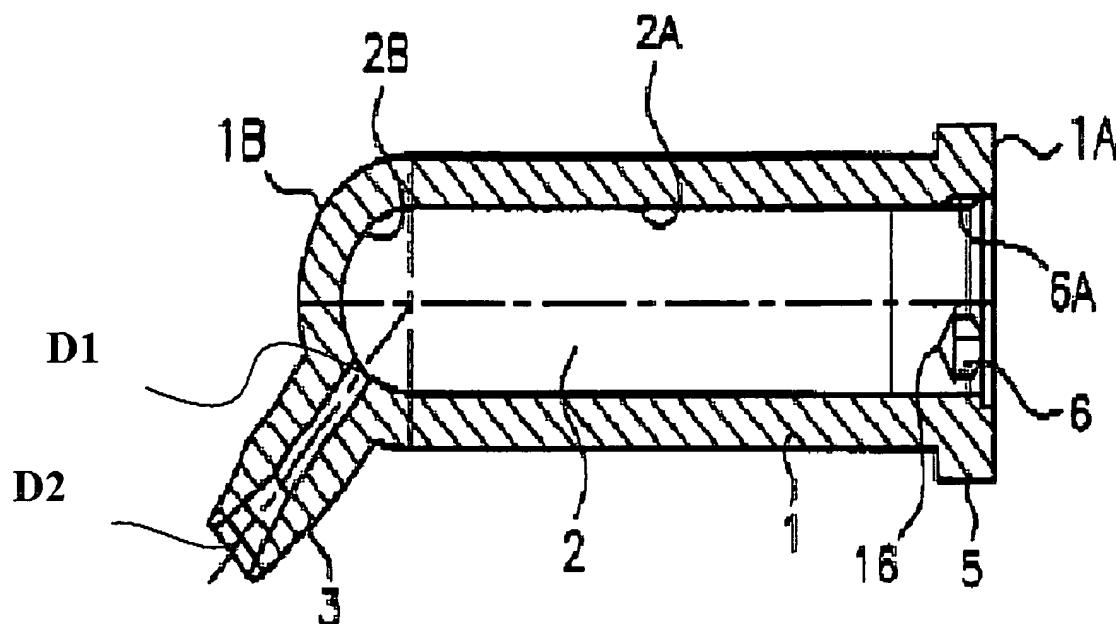
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evers et al. (US 6,503,084) in view of Bender (US 5,707,234) and Schulman (US 5,460,523).

Evers et al. discloses a capsule-like cartridge including an elongated body, cylindrical body wall (1) having uniform interior and exterior diameters. One end wall of the body is open and forms an annular flange; the other end wall has a hemispherical exterior surface and an arcing interior surface. A nozzle (3) is molded integrally with and extends from the end wall at an obtuse angle. The nozzle has an inner channel wall and a channel wall exit orifice rim. The diameter (D2) of the channel wall at one point is greater than the diameter (D1) of the chamber wall exit port rim (see the drawing below). The cartridge also includes a piston (Fig. 8; column 5, lines 43-49) having a semi-circular face complementary to shape of the interior surface of the elongated body.

**FIG. 2**

Regarding claims 1 and 11, Evers et al. fail to disclose that the cartridge is adapted to be operated by being mounted in an ejector type holder and that the thickness of the hemispherical end wall is greater than that of the cylindrical body. However, both these elements are known in the art. Bender discloses a cartridge (34) in Fig. 9 for dispensing dental material in which the cartridge has a semispherical exterior surface and exterior annular flange (56) for attachment to an ejector type holder (Fig. 1). While Bender does not explicitly state the reasons for the ejector type holder it is well known in the art to use such holders to more easily position the cartridge and dispense the cartridge material into the patient's mouth. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the cartridge disclosed by Evers et al. to cooperate with the ejector type holder disclosed by Bender

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so that the dental material may be more easily dispensed by a one-handed device.

Schulman discloses another dental cartridge in which the end wall is provided with substantially greater thickness than the cylindrical body in order to withstand the pressure exerted by the piston, which is greatest at this opening (column 3, lines 48-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the thickness of the cartridge disclosed by Evers et al. to be greater at the hemispherical end wall, so that it may better withstand the pressure exerted by the piston.

Regarding claims 2-5 and 12-15, Evers et al. also discloses a color-coded cap (13) supported by the nozzle (Fig. 5) and that the piston and body are impervious to light that would prematurely cure any dental material (column 6, lines 1-14).

Regarding claims 6-9 and 16-18, the diameter D2 is at least 20 percent greater than the diameter D1.

Regarding claims 10 and 21, the diameter (D3) of the chamber wall is greater than that of the inner channel wall (D2).

Regarding claim 20, the nozzle entrance passage has a length greater than 3 percent of the diameter (D2) of the entrance port.

Regarding claim 22, Evers et al. disclose a cap but fail to disclose a bead circumscribing the nozzle. Bender, who discloses a similar cartridge and cap (70), also discloses a bead, or protrusion, circumscribing the nozzle to help seal the cap (70) to the nozzle (see Fig. 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the cartridge nozzle disclosed by Evers et al. with a

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bead to better secure the cap, as disclosed by Bender, against ingress of contaminating matter.

Allowable Subject Matter

Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

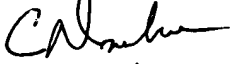
Cheetham et al. (US 2004/0063063) and Zumkeller (US 2005/0147939) are made of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Casey Donahoe whose telephone number is (571) 272-2812. The examiner can normally be reached on Monday - Thursday (7:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272 -4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ralph A. Lewis
Primary Examiner
Au3732

Casey Donahoe
Examiner
Art Unit 3732

c126/2006